

Environmental Protection Agency

§ 98.185

Carbon = Annual mass of carbonaceous materials (e.g., coal, coke) charged to the smelting furnace (tons).

C_{Carbon} = Carbon content of the carbonaceous materials, from the carbon analysis (percent by weight, expressed as a decimal fraction).

Other = Annual mass of any other material containing carbon, other than fuel, fed, charged, or otherwise introduced into the smelting furnace (tons).

C_{Other} = Carbon content of the other material from the carbon analysis results (percent by weight, expressed as a decimal fraction).

(ii) Determine the combined annual process CO_2 emissions from the smelting furnaces at your facility using Equation R-2 of this section.

$$\text{CO}_2 = \sum_{k=1}^k E_{\text{CO}_2 k} \quad (\text{Eq. R-2})$$

Where:

CO_2 = Annual process CO_2 emissions from smelting furnaces at facility used for lead production (metric tons).

$E_{\text{CO}_2 k}$ = Annual process CO_2 emissions from smelting furnace k calculated using Equation R-1 of this section (metric tons/year).

k = Total number of smelting furnaces at facility used for lead production.

(iii) Calculate and report under subpart C of this part (General Stationary Fuel Combustion Sources) the combustion CO_2 emissions from the smelting furnaces according to the applicable requirements in subpart C.

§ 98.184 Monitoring and QA/QC requirements.

If you determine process CO_2 emissions using the carbon mass balance procedure in § 98.183(b)(2)(i) and (b)(2)(ii), you must meet the requirements specified in paragraphs (a) and (b) of this section.

(a) Determine the annual mass for each material used for the calculations of annual process CO_2 emissions using Equation R-1 of this subpart by summing the monthly mass for the material determined for each month of the calendar year. The monthly mass may be determined using plant instruments used for accounting purposes, including either direct measurement of the quantity of the material placed in the unit or by calculations using process operating information.

(b) For each material identified in paragraph (a) of this section, you must determine the average carbon content of the material consumed or used in the calendar year using the methods specified in either paragraph (b)(1) or (b)(2) of this section. If you document that a specific process input or output contributes less than one percent of the total mass of carbon into or out of the process, you do not have to determine the monthly mass or annual carbon content of that input or output.

(1) Information provided by your material supplier.

(2) Collecting and analyzing at least three representative samples of the material each year. The carbon content of the material must be analyzed at least annually using the methods (and their QA/QC procedures) specified in paragraphs (b)(2)(i) through (b)(2)(iii) of this section, as applicable.

(i) ASTM E1941-04, Standard Test Method for Determination of Carbon in Refractory and Reactive Metals and Their Alloys (incorporated by reference, see § 98.7) for analysis of metal ore and alloy product.

(ii) ASTM D5373-08 Standard Test Methods for Instrumental Determination of Carbon, Hydrogen, and Nitrogen in Laboratory Samples of Coal (incorporated by reference, see § 98.7), for analysis of carbonaceous reducing agents and carbon electrodes.

(iii) ASTM C25-06, Standard Test Methods for Chemical Analysis of Limestone, Quicklime, and Hydrated Lime (incorporated by reference, see § 98.7) for analysis of flux materials such as limestone or dolomite.

§ 98.185 Procedures for estimating missing data.

A complete record of all measured parameters used in the GHG emissions calculations in § 98.183 is required. Therefore, whenever a quality-assured value of a required parameter is unavailable, a substitute data value for the missing parameter shall be used in the calculations as specified in the paragraphs (a) and (b) of this section. You must document and keep records of the procedures used for all such estimates.

(a) For each missing data for the carbon content for the smelting furnaces

at your facility that estimate annual process CO₂ emissions using the carbon mass balance procedure in § 98.183(b)(2)(i) and (ii), 100 percent data availability is required. You must repeat the test for average carbon contents of inputs according to the procedures in § 98.184(b) if data are missing.

(b) For missing records of the monthly mass of carbon-containing materials, the substitute data value must be based the best available estimate of the mass of the material from all available process data or data used for accounting purposes (such as purchase records).

§ 98.186 Data reporting procedures.

In addition to the information required by § 98.3(c), each annual report must contain the information specified in paragraphs (a) or (b) of this section, as applicable.

(a) If a CEMS is used to measure CO₂ emissions according to the requirements in § 98.183(a) or (b)(1), then you must report under this subpart the relevant information required by § 98.36 and the information specified in paragraphs (a)(1) through (a)(4) of this section.

(1) Identification number of each smelting furnace.

(2) Annual lead product production capacity (tons).

(3) Annual production for each lead product (tons).

(4) Total number of smelting furnaces at facility used for lead production.

(b) If a CEMS is not used to measure CO₂ emissions, and you measure CO₂ emissions according to the requirements in § 98.183(b)(2)(i) and (b)(2)(ii), then you must report the information specified in paragraphs (b)(1) through (b)(9) of this section.

(1) Identification number of each smelting furnace. (2) Annual process CO₂ emissions (in metric tons) from each smelting furnace as determined by Equation R-1 of this subpart.

(3) Annual lead product production capacity for the facility and each smelting furnace(tons).

(4) Annual production for each lead product (tons).

(5) Total number of smelting furnaces at facility used for production of lead

products reported in paragraph (b)(4) of this section.

(6) Annual material quantity for each material used for the calculation of annual process CO₂ emissions using Equation R-1 of this subpart for each smelting furnace (tons).

(7) Annual average of the carbon content determinations for each material used for the calculation of annual process CO₂ emissions using Equation R-1 of this subpart for each smelting furnace.

(8) List the method used for the determination of carbon content for each material reported in paragraph (b)(7) of this section (e.g., supplier provided information, analyses of representative samples you collected).

(9) If you use the missing data procedures in § 98.185(b), you must report how the monthly mass of carbon-containing materials with missing data was determined and the number of months the missing data procedures were used.

§ 98.187 Records that must be retained.

In addition to the records required by § 98.3(g), each annual report must contain the information specified in paragraphs (a) through (c) of this section, as applicable to the smelting furnaces at your facility.

(a) If a CEMS is used to measure combined process and combustion CO₂ emissions according to the requirements in § 98.183(a) or (b)(1), then you must retain the records required for the Tier 4 Calculation Methodology in § 98.37 and the information specified in paragraphs (a)(1) through (a)(3) of this section.

(1) Monthly smelting furnace production quantity for each lead product (tons).

(2) Number of smelting furnace operating hours each month.

(3) Number of smelting furnace operating hours in calendar year.

(b) If the carbon mass balance procedure is used to determine process CO₂ emissions according to the requirements in § 98.183(b)(2)(i) and (b)(2)(ii), then you must retain under this subpart the records specified in paragraphs (b)(1) through (b)(5) of this section.